

SWEPT FREQUENCY REFLECTOMETRY USING AN OPTICAL SIGNAL  
WITH SINUSOIDAL MODULATION

ABSTRACT OF THE DISCLOSURE

An optical line terminal determines an approximate location of impairment in an  
5 optical transmission path (e.g., optical fiber) without disconnecting the optical line  
terminal from the optical transmission path. The optical line terminal generates pilot  
tones that are modulated on an optical signal and used to make reflection and dispersion  
measurements in a frequency domain reflectometry manner, thus providing for in-vivo  
diagnostic testing of the optical transmission path. The dispersion can be automatically  
10 corrected by using a dispersion compensator.

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